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Nicole Barrese 2/22/05
(Signature & date)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of _____ :

February 22, 2005

Doris, et al. _____ :

Group Art Unit:

Serial No: 10/707,018 _____ :

Examiner:

Filed: 11/14/03 _____ :

International Business Machines Corporation
2070 Route 52
Hopewell Junction, NY 12533

TITLE: Stressed Semiconductor Device Structures Having Granular Semiconductor Material

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the duty of disclosure set forth in 37 C.F.R. 1.56, and further pursuant to the provisions of 37 C.F.R. 1.97 and 1.98, applicants hereby respectfully submit copies of the US and non-US patents and publications as listed on Form PTO-1449, attached hereto.

In citing these documents, no representation is made nor intended as to the pertinency or non-pertinency of the art, that better art than that listed is not available, or that other art is not applicable.

No fee is believed to be due for this submission. If any fees are required, however, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 09-0458.

Respectfully submitted,
Doris, et al.

By Joseph P. Abate 2-22-05
Registration No. 30,238
Telephone No. 845-894-4633

FORM PTO-1449 (Modified) LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		ATTY. DOCKET NO. FIS920030189US1 APPLICANT: Doris, et al.		SERIAL NO. 10/707,018	
		FILING DATE: 11/14/03		GROUP:	

REFERENCE DESIGNATION			U.S. PATENT DOCUMENTS			
EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPRO.)
	6,228,694 B1	5/8/2001	Doyle et al.			
	6,406,973 B1	6/18/2002	Lee			
	6,281,532 B1	8/28/2001	Doyle et al.			
	5,683,934	11/4/97	Candelaria			
	6,368,931 B1	4/9/2002	Kuhn, et al.			
	5,310,446	5/10/94	Konishi et al.			
	4,853,076	8/1/89	Tsaur et al.			
	US 2002/0090791 A1	7/11/2002	Doyle et al.			
	US 2002/0074598 A1	6/20/2002	Doyle et al.			
	6,509,618 B2	1/21/2003	Jan et al.			
	6,476,462 B2	11/5/2002	Shimizu et al.			
	6,362,082 B1	3/26/2002	Doyle et al.			
	6,228,694 B1	5/8/2001	Doyle et al.			
	5,565,697	10/15/96	Asakawa et al.			
	US 2003/0040158 A1	2/27/2003	Saitoh			
	US 2002/0086472 A1	7/4/2002	Roberds et al.			
	6,521,964 B1	2/18/2003	Jan et al.			
	6,506,652	01/14/03	Jan, et al.			

FOREIGN PATENT DOCUMENTS							
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
					YES	NO	

OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

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	5,081,513	1/14/1992	Jackson, et al.			
	3,602,841	8/31/1971	McGroddy			
	6,531,740	3/11/2003	Bosco, et al.			
	6,531,369	3/11/2003	Ozkan, et al.			
	6,501,121	12/31/2002	Yu, et al.			
	6,498,358	12/24/2002	Lach, et al.			
	6,493,497	12/10/2002	Ramdani, et al.			
	6,403,975	6/11/2002	Brunner, et al.			
	6,361,885	3/26/2002	Chou			
	6,255,169	7/3/2001	Li, et al.			
	6,246,095	6/12/2001	Brady, et al.			
	6,165,383	12/26/2000	Chou			
	6,133,071	10/17/2000	Nagai			
	6,046,464	4/4/2000	Schetzina			
	6,025,280	2/15/2000	Brady, et al.			

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FEB 28 2005

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	5,940,736	8/17/1999	Brady, et al.			
	5,880,040	3/9/1999	Sun, et al.			
	5,861,651	1/19/1999	Brasen, et al.			
	5,679,965	10/21/1997	Schetzina			
	5,670,798	9/23/1997	Schetzina			
	5,561,302	10/1/1996	Candelaria			
	5,471,948	12/5/1995	Burroughes, et al.			
	5,459,346	10/17/1995	Asakawa, et al.			
	5,391,510	2/21/1995	Hsu, et al.			
	5,371,399	12/6/1994	Burroughes, et al.			
	5,108,843	4/28/1992	Ohtaka, et al.			
	5,060,030	10/22/1991	Hoke			
	4,958,213	9/18/1990	Eklund, et al.			
	4,665,415	5/12/1987	Esaki, et al.			
	6,635,506	10/21/2003	Volant et al.			

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FORM PTO-1449 (Modified) FEB 25 2005

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	5,989,978	11/23/1999	Peidous			
	6,284,626	9/4/2001	Kim			
	6,274,444	8/14/2001	Wang			
	6,261,964	7/17/2001	Wu, et al.			
	6,221,735	4/24/2001	Manley, et al.			
	6,117,722	9/12/2000	Wuu, et al.			
	6,107,143	8/22/2000	Park, et al.			
	6,090,684	7/18/2000	Ishitsuka, et al.			
	6,066,545	5/23/2000	Doshi, et al.			
	6,008,126	12/28/1999	Leedy			
	5,946,559	8/31/1999	Leedy			
	5,840,593	11/24/1998	Leedy			
	5,592,018	1/7/1997	Leedy			
	5,592,007	1/7/1997	Leedy			
	5,571,741	11/5/1996	Leedy			

FOREIGN PATENT DOCUMENTS

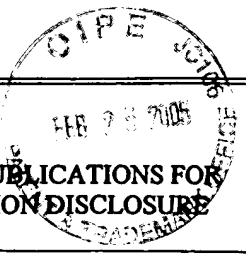
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EXAMINER INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPRO.)
	5,557,122	9/17/1996	Shrivastava, et al.			
	5,354,695	10/11/1994	Leedy			
	5,134,085	7/28/1992	Gilgen, et al.			
	5,006,913	4/9/1991	Sugahara, et al.			
	4,952,524	8/28/1990	Lee, et al.			
	4,855,245	8/8/1989	Neppl, et al.			
	2002/0086497	07-04-2002	Kwok			
	5,960,297	09-28-1999	Saki			
	6,403,486	06-11-2002	Lou			
	6,284,623	09-04-2001	Zhang et al.			
	2003/0032261	02-13-2003	Yeh et al.			
	2003/0057184 ✓	03-27-2003	Yu et al.			
	6,265,317	07-24-2001	Chiu et al.			
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	6,461,936	10-08-2002	von Ehrenwall			
	6,319,794	11-20-2001	Akatsu et al.			
	2001/0009784	07-26-2001	Ma et al.			
	6,621,392	09-16-2003	Volant et al.			

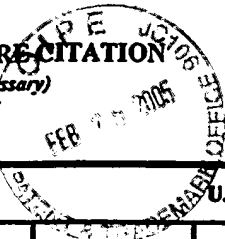
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*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,940,716	8/17/1999	Jin, et al.			
		6,483,171 B1	11/19/02	Forbes, et al.			
		2002/0063292 A1	5/30/02	Armstrong, et al.			

FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
	JP64-76755	03-1989	Japan				

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Supplemental FORM PTO-1449 (Modified)		ATTY. DOCKET NO. FIS920030189US1	SERIAL NO. 10/707,018
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DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
					YES	NO

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		Kern Rim, et al., "Transconductance Enhancement in Deep Submicron Strained-Si <i>n</i> -MOSFETs", International Electron Devices Meeting, 26, 8, 1, IEEE, September 1998.
		Kern Rim, et al., "Characteristics and Device Design of Sub-100 nm Strained Si N- and PMOSFETs", 2002 Symposium On VLSI Technology Digest of Technical Papers, IEEE, pp 98-99.
		Gregory Scott, et al., "NMOS Drive Current Reduction Caused by Transistor Layout and Trench Isolation Induced Stress", International Electron Devices Meeting, 34.4.1, IEEE, September 1999.
		F. Ootsuka, et al., "A Highly Dense, High-Performance 130nm node CMOS Technology for Large Scale System-on-a-Chip Application", International Electron Devices Meeting, 23.5.1, IEEE, April 2000.
		Shinya Ito, et al., "Mechanical Stress Effect of Etch-Stop Nitride and its Impact on Deep Submicron Transistor Design", International Electron Devices Meeting, 10.7.1, IEEE, April 2000.
		A. Shimizu, et al., "Local Mechanical-Stress Control (LMC): A New Technique for CMOS-Performance Enhancement", International Electron Devices Meeting, IEEE, March 2001.
		K. Ota, et al., "Novel Locally Strained Channel Technique for high Performance 55nm CMOS", International Electron Devices Meeting, 2.2.1, IEEE, February 2002.

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							YES	NO

OTHER DOCUMENTS

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		G. Zhang, J. Cressler, G. Niu, A. Joseph, "A New 'Mixed-Mode' Reliability Degradation Mechanism in Advanced Si and SiGe Bipolar Transistors". IEEE Transactions on Electron Devices, vol. 49, no. 12, December 2002, pp. 2151-56.
		H.S. Momose, Y. Niitsu, H. Iwai, K. Maeguchi, "Temperature Dependence of Emitter-Base Reverse Stress Degradation and its Mechanism Analyzed by MOS Structures". Paper 6.2, pp. 140-143.

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OTHER DOCUMENTS

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		C.J. Huang, C.J. Sun, T.A. Grotjohn, D.K. Reinhard, "Temperature Dependence and Post-Stress Recovery of Hot Electron Degradation Effects in Bipolar Transistors". IEEE 1991 Bipolar Circuits and Technology Meeting 7.5, pp. 170-173.
		S.R. Sheng, S.P. McAllister, J.P. McCaffrey, S. Kovacic, "Degradation and Recovery of SiGe HBTs Following Radiation and Hot-Carrier Stressing". Pp. 14-15.

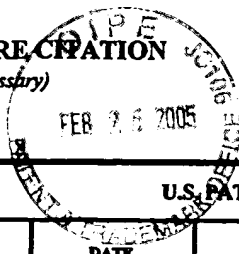
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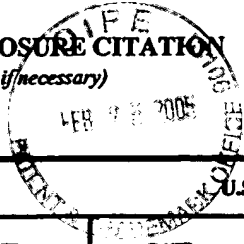
		Z. Yang, F. Gaurin, E. Hostetter, G. Freeman, "Avalanche Current Induced Hot Carrier Degradation in 200GHz SiGe Heterojunction Bipolar Transistors". Pp. 1-5.
		H. Li, H.M. Rein, T. Suttrop, "Design of W-Band VCOs with High Output Power for Potential Application in 77 GHz Automotive Radar Systems". 2003 IEEE GaAs Digest, pp. 263-266.

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		H. Wurzer, R. Mahnkopf, H. Klose, "Annealing of Degraded npn-Transistors- Mechanisms and Modeling". IEEE Transactions on Electron Devices, vol. 41, no. 4, April 1994, pp. 533-538.
		B. Doyle, G.J. Dunn, "Recovery of Hot-Carrier Damage in Reoxidized Nitrided Oxide MOSFET's". IEEE Electron Device Letters, vol. 13, no. 1, January 1992, pp. 38-40.

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		H.S. Momose, H. Iwai, "Analysis of the Temperature Dependence of Hot-Carrier-Induced Degradation in Bipolar Transistors for Bi-CMOS". IEEE Transactions on Electron Devices, vol. 41, no. 6, June 1994, pp. 978-987.

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